

**PULSE OXIMETRY MOTION ARTIFACT REJECTION USING NEAR
INFRARED ABSORPTION BY WATER**

ABSTRACT OF THE DISCLOSURE

A method and an apparatus for measuring a physiological parameter, functioning based on obtaining a first signal derived from electromagnetic energy transmitted through a tissue portion at a first wavelength, the first signal including a signal portion corresponding with motion-related events and a signal portion corresponding with arterial pulsation events, where at the first wavelength water is a dominant absorber of electromagnetic energy in the tissue portion; obtaining a second signal derived from electromagnetic energy transmitted through a tissue portion at a second wavelength, the second signal including a signal portion corresponding with motion-related events and a signal portion corresponding with arterial pulsation events, where at the second wavelength hemoglobin is a dominant absorber of electromagnetic energy in the tissue portion; and combining the first signal and the second signal to generate a combined plethysmograph signal, such that the combined signal has a signal portion corresponding with motion-related events that is smaller than that present in the first signal or the second signal.